

Notice of Allowability

Application No.

09/370,302

Examiner

Tamiko D. Bellamy

Applicant(s)

PUSKAS, WILLIAM L.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 4/22/05.
2. ☒ The allowed claim(s) is/are 24-44 and 83-95.
3. ☒ The drawings filed on 8/9/99 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
 Paper No./Mail Date 4/7/00 (only pages 2 and 3)
4. ☐ Examiner's Comment Regarding Requirement for Deposit
 of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
 Paper No./Mail Date _____.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Specification

1. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 120 as follows:

The application is not co-dependent on 08/718,945 and was not filed within on year (See MPEP 201.07).

2. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 119 as follows:

The application cannot be a continuation from a Provisional Application (See MPEP 201.07).

3. This application is claiming the benefit of a provisional application under 35 U.S.C. 119(e). However, this application was not filed within twelve months from the filing date of the provisional application, and there is no indication of an intermediate nonprovisional application that is directly claiming the benefit of the provisional application and filed within 12 months of the filing date of the provisional application.

Note: If the day that is 12 months after the filing date of the provisional application falls on a Saturday, Sunday, or Federal holiday within the District of Columbia, the nonprovisional application claiming the benefit of the provisional application may be filed on that next succeeding business day.

4. An application in which the benefits of an earlier application are desired must contain a specific reference to the prior application(s) in the first sentence(s) of the specification or in an application data sheet by identifying the prior application by application number (37 CFR

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1.78(a)(2) and (a)(5)). If the prior application is a non-provisional application, the specific reference must also include the relationship (i.e., continuation, divisional, or continuation-in-part) between the applications except when the reference is to a prior application of a CPA assigned the same application number. **The applicant has not complied with the requirements for benefit under 120 and 119 (e).**

Allowable Subject Matter

5. Claims 24- 44, and 83-95 are allowed.

The following is an examiner's statement of reasons for allowance:

Re claim 24, the independent claim includes " the enclosure for housing a sample liquid, wherein the enclosure is adapted to isolate the sample liquid from the process liquid" in combination with the remaining claim limitation is not taught and/or made obvious by the prior art. See remarks pages 8-9 received on 4/22/05.

Re claim 32, the independent claim includes " determining total cavitation energy released based upon signals indicative of temperature of the sample liquid over time" in combination with the remaining claim limitation is not taught and/or made obvious by the prior art. Shibano considered to be the closest art of record teaches detecting the conductivity of a process liquid (e.g., cleaning liquid 3). Shibano does not teach **determining total cavitation energy released based upon signals indicative of temperature of the sample liquid over time**. Schiele teaches determining the cavitation energy released from a process fluid. Schiele does not teach **an enclosure for housing a sample liquid, the enclosure passing ultrasonic energy from the process liquid to the sample liquid**.

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Re claim 33, the independent claim includes “ means for calculating total energy released from the cavitation through the following relationship: $\text{energy (calories)} = \text{specific heat} \times \text{mass of the sample liquid} \times \text{change in temperature}$ ” in combination with the remaining claim limitation is not taught and/or made obvious by the prior art. Shibano considered to be the closest art of record teaches detecting the conductivity of a process liquid (e.g., cleaning liquid 3). Shibano does not teach **means for calculating total energy released from the cavitation through the following relationship: $\text{energy (calories)} = \text{specific heat} \times \text{mass of the sample liquid} \times \text{change in temperature}$.** Schiele teaches determining the cavitation energy released from a process fluid. Schiele does not teach **an enclosure for housing a sample liquid, the enclosure passing ultrasonic energy from the process liquid to the sample liquid, or means for calculating total energy released from the cavitation through the following relationship: $\text{energy (calories)} = \text{specific heat} \times \text{mass of the sample liquid} \times \text{change in temperature}$.**

Re claim 34, the independent claim includes “ determining cavitation density based upon signals indicative of conductivity of the sample liquid over time” in combination with the remaining claim limitation is not taught and/or made obvious by the prior art. Shibano considered to be the closest art of record teaches detecting the conductivity of a process liquid (e.g., cleaning liquid 3). Shibano does not teach **determining cavitation density based upon signals indicative of conductivity of the sample liquid over time.** Schiele teaches determining the cavitation energy released from a process fluid. Schiele does not teach **an enclosure for housing a sample liquid, the enclosure passing ultrasonic energy from the process liquid to the sample liquid, or means for calculating total energy released from the cavitation**

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through the following relationship: energy (calories)= specific heat x mass of the sample liquid x change in temperature.

Re claim 36, the independent claim includes “ a functional relationship defined as $n = (C, Co)$ between conductivity and a number (n) of cavitation implosions” in combination with the remaining claim limitation is not taught and/or made obvious by the prior art. Shibano considered to be the closest art of record teaches detecting the conductivity of a process liquid (e.g., cleaning liquid 3). Shibano does not teach **a functional relationship defined as $n = (C, Co)$ between conductivity and a number (n) of cavitation implosions**. Schiele teaches determining the cavitation energy released from a process fluid. Schiele does not teach **a functional relationship defined as $n = (C, Co)$ between conductivity and a number (n) of cavitation implosions**.

Re claim 42, the independent claim includes “ a feedback means for controlling generator frequency in response to the signals” in combination with the remaining claim limitation is not taught and/or made obvious by the prior art. Shibano considered to be the closest art of record teaches detecting the conductivity of a process liquid (e.g., cleaning liquid 3). Shibano does not teach **a feedback means for controlling generator frequency in response to the signals**. Schiele teaches a feedback means. Schiele does not teach **an enclosure for housing a sample liquid, the enclosure passing ultrasonic energy from the process liquid to the sample liquid**.

Re claim 43, the independent claim includes “ a feedback means for controlling generator power output in response to the signals “ in combination with the remaining claim limitation is not taught and/or made obvious by the prior art. Shibano considered to be the closest art of record teaches detecting the conductivity of a process liquid (e.g., cleaning liquid 3). Shibano

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does not teach **a feedback means for controlling generator power output in response to the signals**. Schiele teaches a feedback means. Schiele does not teach **an enclosure for housing a sample liquid, the enclosure passing ultrasonic energy from the process liquid to the sample liquid**.

Re claim 44, the independent claim includes “ a feedback means for amplitude modulating signals from the generator to control cavitation density as a function of time within a process liquid “ in combination with the remaining claim limitation is not taught and/or made obvious by the prior art. Shibano considered to be the closest art of record teaches detecting the conductivity of a process liquid (e.g., cleaning liquid 3). Shibano does not teach **a feedback means for amplitude modulating signals from the generator to control cavitation density as a function of time within a process liquid**. Schiele teaches a feedback means. Schiele does not teach **an enclosure for housing a sample liquid, the enclosure passing ultrasonic energy from the process liquid to the sample liquid**.

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamiko D. Bellamy whose telephone number is (571) 272-2190. The examiner can normally be reached on Monday - Friday 7:30 AM to 3:30 PM.

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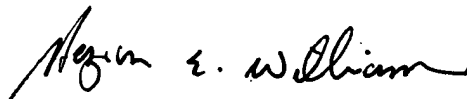
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tamiko Bellamy

T-B.

July 19, 2005



HEZRON WILLIAMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800